STATE OF WASHINGTON

DEPARTMENT OF FISH & WILDLIFE

LANDS AND RESTORATION SERVICES PROGRAM

Salmonid Screening, Habitat Enhancement &
Restoration Division (SSHEAR)

OFF-CHANNEL SITE INVENTORY DATA

General Information:

Region: North Coast

Observer(s): Nettnin

River System: Sol Duc

Date: 11/25/96 - 1/15/97

Site Identifier: S-304L-01

WRIA: 20.0304 A

River Mile Location: 1.0

RB/LB: LB

Local Name: E.F. Gunderson

Trib. to: Gunderson Cr. 20.0304

Legal Description: NW¼ Sec 29 T29N R13W

County: Clallam

Habitat Type: Terrace Tributary

Landowner: () Federal () State () County () Other Government (X) Private
- Joel Dahlgren
- Possible other private landowners involved.
- Rayonier Timberlands Operating Company

Directions to site:
Starting at Forks drive north on highway 101 to Luken Rd. (MP 196.2 access to Forest Service headquarters). Turn onto Luken Rd. and proceed about 0.1 mi. to the top of the hill. There are two driveways, one to the left and one to the right, go straight and park at the cable gate (Dahlgren's property). Proceed down the road through the timber and into a pasture. Part way through the pasture one will cross a culvert (about 0.2 mi. from the gate.). This is Luken Marsh (S-304L-03). Continue on to the bridge (60 - 80 m), immediately above the bridge is the confluence of Wapiti Flats channel (S-304L-04) and E.F. Gunderson (S-304L-01). Wapiti Flats is the channel that continues straight away from the bridge. The E.F. Gunderson can also be accessed by turning on the 2000 line, about 3.1 mi. north of Forks, and proceeding 0.8 mi. to the stream crossing.

Site Overview:
This third order stream is three miles long and drains about 400 acres. It has a flat to gentle gradient throughout the entire channel and about 80% of this stream is associated with wetlands. About 90% of the timber in the drainage has been harvested and is now young conifer plantations, also there is about 40 acres of pasture in the middle reach.

Habitat Information:

Water source: Surface runoff, springs and wetlands

Intermittent/year-around:
- Unknown at this time (probably year-around in lower reach and inter-mittent in the upper reach).

Estimated flows (cfs): Due to the size of system and number of visits, the upper and lower readings weren't always taken on the same day.

Lower end: 11/25/96= 11 - 13
12/12/96= 15 - 20

Upper end: 12/18/96= 5 - 7
1/15/97= 1 - 2

Water temperatures: Due to the size of system and number of visits, the upper and lower readings weren't always taken on the same day.

Lower end: 1/15/97= 2.0° C
11/25/96= 6.0° C
12/12/97= 4.5° C
2/19/97 = 5.0° C

Upper end: 1/15/97= 1.5° C
2/12/97 = 4.5° C

Adjacent stream temperature: W.F. Gunderson Cr. 1/15/97= 4.0° C
- 11/25/96: 7.0° C

Other water observations: Water is tannic colored

Site area measurements: () Indirect () Direct (X) Combination

Widths:	Channel- 2 - 3 m	Ponds- NA	Wetlands- 20 - 100 m	
Depths:	Channel- 8 - 60 cm	Ponds- NA	Wetlands- 10 - 40 cm	Max- 60 cm

Total length (includes ponds and wetlands): 4,970 m

Total existing habitat area (est.): 26,425 m²

Spawning area:	Mainstem- 50 m²	Tribs- 0 m²	Total- 50 m²
Impounded area:	Mainstem- None	Tribs- 8,480 m²	Total- 8,480 m²
Other rearing area:	Mainstem- 14,850 m²	Tribs-3,045 m²	Total- 17,895 m²

Spawning Habitat conditions: () None (X) Poor () Fair () Good () Excellent

Describe spawning habitat:

- The spawning habitat is located in the lower 200 meter reach, above the confluence with the W.F. Gunderson Creek. The gravel has a lot of fines in it and the low gradient doesn't provide opportunities to clean it. There are better stream conditions in the upper/middle reach but it lacks gravel.

Rearing habitat conditions: () None () Poor (X) Fair () Good (X) Excellent

Describe pond and other rearing habitat:

- Channel is low gradient with low velocities where the channel braids in the wetlands. Velocities in the lower and middle reach seem fast for coho rearing. In the heavily shaded portions of the wetlands, instream cover is lacking.
- Water remains clear during high flows
- The upper 1300 meter reach is a series of small beaver dams in a large sedge covered wetland with hillocks planted to spruce.
- The one reach that appears to have impounded water was created by an old railroad grade that has a blocked culvert. During long dry spells, water does drain out so I am inclined not to call it impounded.

Describe unaccessible habitat:

- The upper 1500 meters is a fish blockage part of time due to significantly high beaver dams or a plugged culvert. This reach is mainly sedge wetland type habitat and is probably the premium rearing habitat in this system.

Describe wetland: () Bog (X) Marsh (X) Scrub-shrub Wetland (X) Forested Wetland

- The first 1000 meters above the culvert on the D-2000 Line has a well defined channel, but for about 25 meters either side of the channel is forested wetland. For the next 1000 meters upstream, the wetland widens and the channel has more braiding, but is still pretty well defined. There is less canopy in this reach. There is a mixture of marsh, scrub-shrub and wooded wetlands in this reach. Then the upper 1400 meters are open sedge marsh planted to spruce, which in time will become a wooded wetland. The wetlands vary in width from about 50 meters to about 160 meters.

These wetlands support: sedges, rushes, salmonberry, wild rose, blackberry, spirea, ninebark, vine maple, willow, red osier dogwood, crab apple, alder, spruce, cottonwood and cedar.

Flooding potential: (X) Low () Medium () High
This system is well removed from any flood potential.

Fish Information:

Site entry condition to (Gunderson Cr. 20.0304): () Poor () Fair (X) Good

Coho access and use:

Juvenile- () Unknown () None (X) Poor () Fair () Good
Adult- (X) Unknown () None () Poor () Fair () Good

- Adults can access this stream. There is limited spawning habitat,but there were no recent redds observed. There were some disturbed areas that looked like they could have been old redds.
- Juveniles have open access to this system but it appears to be under utilized.
- On 1/8 -1/9/97 one minnow trap was set at the bridge on J. Dahlgren's property. One cottid was caught but no salmonid.
- On 2/11 - 2/12/97 eight minnow trap were set and fished in the upper reach; six cottid were caught but no salmonid.
- On 2/19 - 2/20/97 eight minnow traps were set and fished in the lower to middle reach; One coho was caught below the D-2000, no fish were caught in the next five upstream traps and two coho were caught in the last trap, furthest upstream, in the lower-middle reach.

Other species access and use: () Chum () Pink () Sockeye () Chinook (X) Trout

- On 2/19 - 2/20/97 two cutthroat trout were captured below the D-2000. There were no trout caught in the other 15 traps set throughout the system. Those reaches are accessible.

Habitat Improvements:

Enhancement opportunities:

- Install gravel pads above and below the bridge in the middle reach.
- Remove culvert in upper reach at abandoned grade (Migration problem)
- Install controls in old grade to preserve impounded water.
- Make sure culvert on Dahlgren's property is passable.
- Replace beaver dam above the culvert on Dahlgren's property with controls.
- Good equipment access. Need to check integrity of the bridges

Additional Comments:

- The land owner commented that several years ago when the road work was permitted, the middle reach was electro-fished with no success. There were no obvious barriers observed during the survey, however in the very brushy wetlands the channel was not always in view.
- There are three culverts in this system. The first is a 6 X 50 ft; it has about 4 ft/sec velocity on moderate to high flows. The second and third culverts have problems (See the culvert report at the end of document).

Attachments Available:

Contact respective SSHEAR habitat biologist for the following checked items:

() Aerials	(X) Sketch	(X) Maps	(X) Culvert Report
() Other references	() Spawning surveys	(X) Juvenile trapping	() Fishway Report

NORTH COAST OFF CHANNEL SURVEY
SUBSEQUENT SITE EVALUATION FORM

River System: Sol Duc

Site No.: S-304L-01
Site Name: E.F. Gunderson
WRIA: 20.0304 A

DATE: 1/8 - 2/20/97 **OBSERVER:** Darrow, Nettnin

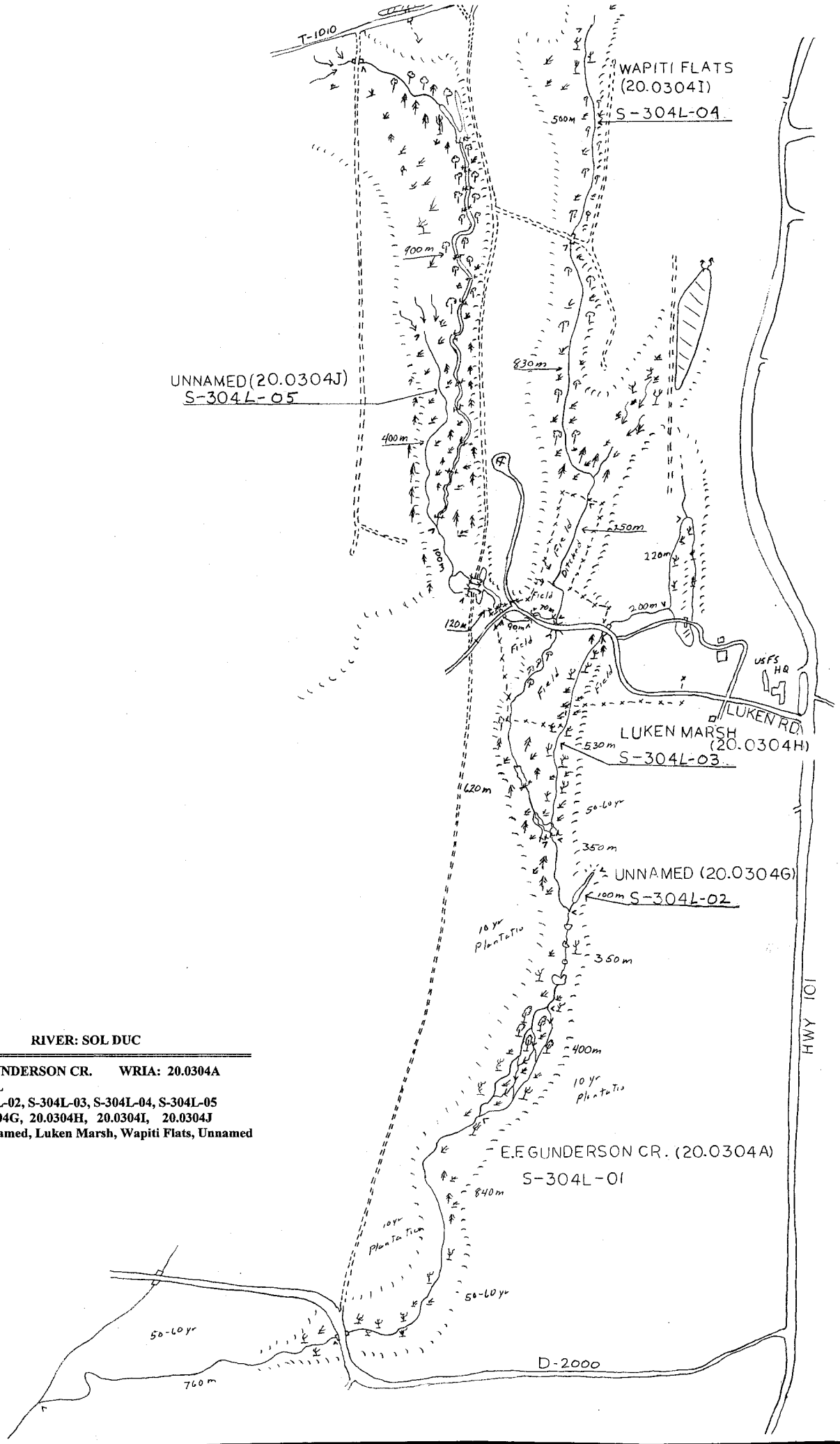
MINNOW TRAPPING REPORT

TRAP	DATE SET	TEMP	DATE PULLED	TEMP	CATCH COHO UMRK	COHO MRK	RBT	CUTT	COTTID
1	2/19	6.5°C	2/20	5.0°C	0	0	0	2	0
2	2/19	6.5°C	2/20	5.0°C	1	0	0	0	0
3	2/19	6.5°C	2/20	5.0°C	0	0	0	0	0
4	2/19	6.5°C	2/20	5.0°C	0	0	0	0	0
5	2/19	6.5°C	2/20	5.0°C	0	0	0	0	0
6	2/19	6.5°C	2/20	5.0°C	0	0	0	0	0
7	2/19	6.5°C	2/20	5.0°C	0	0	0	0	0
8	2/19	6.5°C	2/20	5.0°C	2	0	0	0	0
9	2/11	4.5°C	2/12	4.5°C	0	0	0	0	0
10	2/11	4.5°C	2/12	4.5°C	0	0	0	0	0
11	1/8	5.0°C	1/9	5.0°C	0	0	0	0	1
12	2/11	4.5°C	2/12	4.5°C	0	0	0	0	0
13	2/11	4.5°C	2/12	4.5°C	0	0	0	0	0
14	2/11	4.5°C	2/12	4.5°C	0	0	0	0	1
15	2/11	4.5°C	2/12	4.5°C	0	0	0	0	0
16	2/11	4.5°C	2/12	4.5°C	0	0	0	0	4
17	2/11	4.5°C	2/12	4.5°C	0	0	0	0	1
			TOTALS:		3	0	0	2	7

COMMENTS:
-Trap 1 was placed about 500 m below the culvert on the D- 2000.
-Trap 2 was placed about 50 m below the culvert on the D-2000.
-Trap 3 was placed about 500 m above the culvert on the D-2000.
-Trap 4 was placed about 600 m above the culvert on the D-2000.
-Trap 5 was placed about 800 m above the culvert on the D-2000 in a side channel.
-Trap 6 was placed about 800 m above the culvert on the D-2000 in the main channel.
-Trap 7 was placed about 1100 m above the culvert on the D-2000.
-Trap 8 was placed about 1300 m above the culvert on the D-2000in an open pooled area
-Trap 9 was placed about 200 m below the first bridge on J. Dahlgren's property.
-Trap 10 was placed about 100 m below the first bridge on J. Dahlgren's property.
-Trap 11 was placed just on the upstream side of the first bridge on J. Dahlgren's property.
-Trap 12 was placed in between the first bridge and second bridge on J. Dahlgren's property.
-Trap 13 was placed in between the second bridge and the first culvert on J. Dahlgren's property.
-Trap 14 was placed 60 m above the first culvert on J. Dahlgren's property.
-Trap 15 was placed just on the downstream side of the old railroad grade.
-Trap 16 was placed about 100m above the old railroad grade.
-Trap 17 was placed about 200m above the old railroad grade.

Observations made on this system, minnow trapping, and past electrofishing quantify a closer examination due to the under utilization by fish. It is suggested that the D-2000 culvert may be a possible velocity barrier,or there may be a water quaility problem.

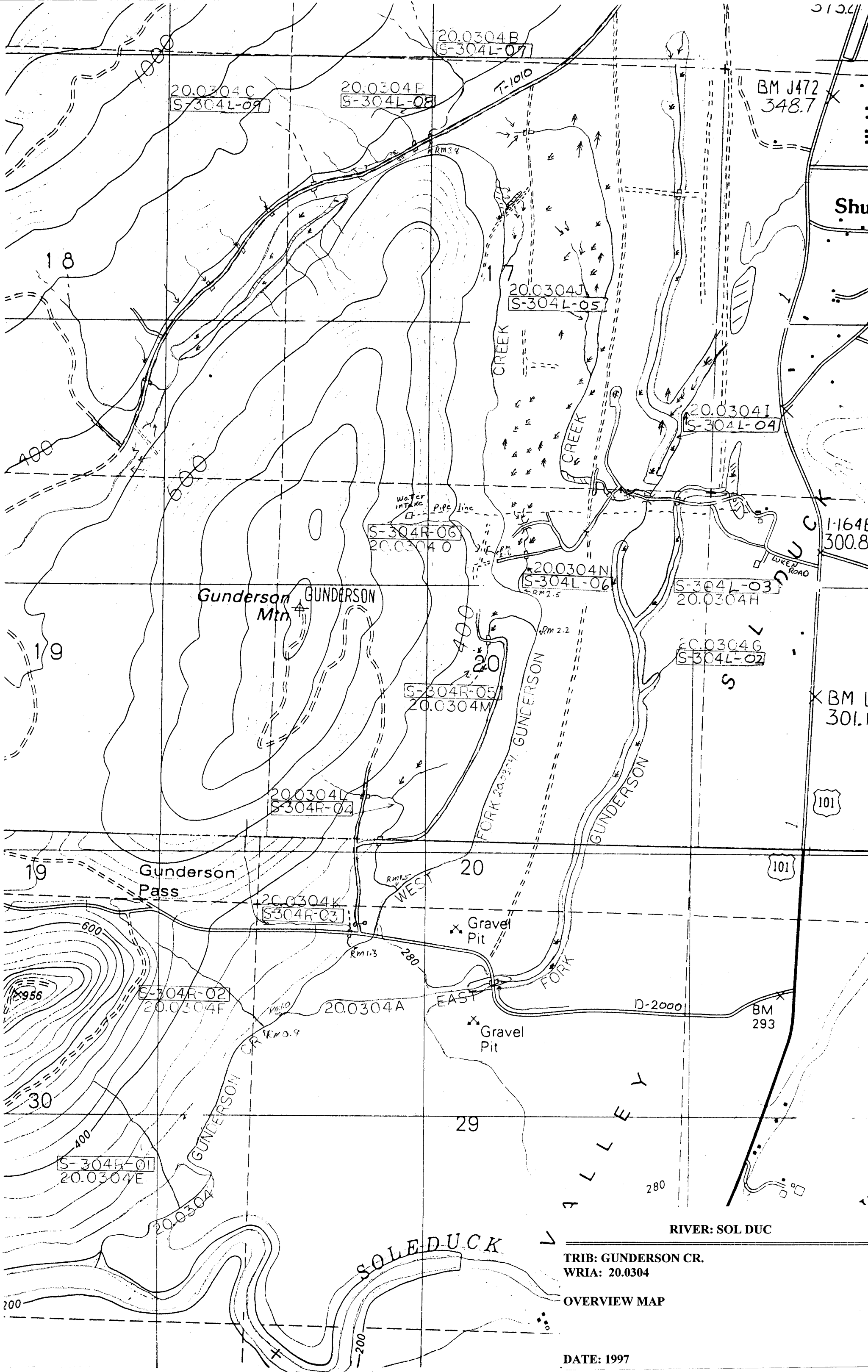
DOC: S-304L-01



RIVER: SOL DUC

TRIB: E.F.GUNDERSON CR. WRIA: 20.0304A
AREA: S-304L
SITES: S-304L-02, S-304L-03, S-304L-04, S-304L-05
WRIA: 20.0304G, 20.0304H, 20.0304I, 20.0304J
NAMES: Unnamed, Luken Marsh, Wapiti Flats, Unnamed

DATE: 1/97



RIVER: SOL DUC

TRIB: GUNDERSON CR.
WRIA: 20.0304

OVERVIEW MAP

DATE: 1997

RIVER: SOL DUC RIVER

AREA: S-R2

AREA MAP

9/96